

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF THE CLAIMS:

1 - 9. (Cancelled)

10. (Currently Amended) A method for generating an aerosol comprising the steps of:

- (a) heating a physiologically active compound to vaporize at least a portion of ~~said the~~ compound;
- (b) mixing the resulting vapor with a gas, in a ratio, to form an aerosol having a desired particle size when a stable concentration of particles in the gas is reached, wherein the ratio of vapor to gas is controlled by regulating the gas flow rate within a desired range and wherein the flow rate is monitored and heating of the compound is stopped if the flow rate is not maintained within the desired range; and
- (c) administering the resulting aerosol to a patient.

11. (Currently Amended) The method of claim 10 wherein ~~said the~~ patient is alerted with an annunciating signal if ~~said the~~ compound is not being vaporized.

12 - 38. (Cancelled)

39. (Withdrawn) A method for generating an aerosol comprising the steps of:

- (a) depositing a thin film comprising a physiologically active compound onto a substrate;
- (b) heating the physiologically active compound to vaporize at least a portion of said compound by moving said substrate through an alternating magnetic field, wherein the shape of said alternating magnetic field is controlled by a ferrite core; and

(c) mixing the resulting vapor with a gas that is swept across the thin film, in a ratio, to form a desired particle size when a stable concentration of particles in the gas is reached.

40. (Withdrawn) The method of claim 39 wherein said substrate has a plurality of sections that are heated sequentially.

41. (Withdrawn) The method of claim 40 wherein said ferrite core has a saturation value such that by changing the drive frequency and amplitude the resulting magnetic field expands to sequentially heat said sections.

42. (Withdrawn) The method of claim 41 wherein said ferrite core has a variable air gap so that the resulting magnetic field expands to sequentially heat said sections by varying the shape of said air gap of said ferrite core.

43. (Withdrawn) The method of claim 42 wherein the ferrite core is a toroid shape with a slit cut through it.

44 - 47. (Cancelled)

48. (Currently Amended) A method for generating an aerosol comprising the steps of:

(a) heating a physiologically active compound, ~~contained in a heating vaporization zone having a restricted cross sectional area~~, to vaporize at least a portion of said compound; the compound;

(b) ~~mixing~~ cooling the resulting vapor ~~rapidly by mixing the vapor~~ with a gas, in a ratio, to form an aerosol having a desired particle size when a stable concentration of particles in the gas is reached; and

(c) ~~maintaining a pressure drop of restricted gas flow at no greater than 10 inches of water~~ administering the aerosol to a patient.

49 - 123. (Canceled)

124. (Currently Amended) A method for generating an aerosol comprising the steps of:

(a) depositing a physiologically active compound onto an electrically conductive mesh or screen ~~earrier~~; and

(b) heating the ~~earrier~~ mesh screen by passing a current across the ~~earrier~~ mesh screen to vaporize at least a portion of the compound, while simultaneously passing a gas through the ~~earrier~~ mesh screen thereby mixing the resulting vapor with the gas, in a ratio, to form an aerosol having a desired particle size when a stable concentration of particles in the gas is reached.

125. (Currently Amended) The method of claim 124 wherein the ~~earrier~~ mesh screen is a single layer of stainless steel mesh.

126. (Currently Amended) The method of claim 124 wherein the ~~earrier~~ mesh screen comprises a plurality of layers of mesh.

127. (Original) The method of claim 125 wherein the stainless steel mesh is 200 mesh.

128. (Previously Presented) The method of claim 124 wherein the current is supplied by the discharging of a capacitor.

129. (Currently Amended) The method of claim 124 wherein the current is passed across the ~~earrier~~ mesh screen for less than about 20 milliseconds.

130. (Currently Amended) The method of claim 124 wherein the current is passed across the ~~earrier~~ mesh screen for between about 2 and 10 milliseconds.

131 - 134. (Cancelled)

135. (Currently Amended) The method of claim 10 wherein the flow rate of the gas is regulated by the inspiration rate of the patient.

136. (Previously Presented) The method of claim 135 wherein the patient is alerted with an annunciating signal when the flow rate is not maintained within the desired range.

137. (Previously Presented) The method of claim 10 wherein the ratio of vapor to gas is additionally controlled by regulating the rate of vaporization.

138. (Currently Amended) The method of claim 137 wherein the vaporization rate is controlled by ~~adjusting the heating of said compound~~ changing the energy transferred to the compound during heating.

139. (Currently Amended) The method of claim 10 further comprising depositing ~~wherein the compound is deposited onto a substrate prior to step (a).~~

140. (Currently Amended) The method of claim ~~40~~ 139 further comprising wherein ~~the compound is vaporized at a temperature below the boiling point of the compound by passing~~ the gas across the surface of the compound.

141. (Previously Presented) The method of claim 10 wherein the particle size is between about 1 to 3 microns.

142. (Previously Presented) The method of claim 10 wherein the particle size is between about 10 to 100 nanometers.

143. (Previously Presented) The method of claim 10 wherein the gas is air.

144. (Previously Presented) The method of claim 10 wherein the compound is selected from the group consisting of cannabinoid extracts from cannabis, THC, ketorolac, fentanyl, morphine, testosterone, ibuprofen, codeine, nicotine, Vitamin A, Vitamin E acetate, Vitamin E,

nitroglycerin, pilocarpine, mescaline, testosterone enanthate, menthol, phencaramide, methsuximide, eptastigmine, promethazine, procaine, retinol, lidocaine, trimeprazine, isosorbide dinitrate, timolol, methypylon, etamiphyllin, propoxyphene, salmetrol, vitamin E succinate, methadone, oxprenolol, isoproterenol bitartrate, etaqualone, Vitamin D3, ethambutol, ritodrine, omoconazole, cocaine, lomustine, ketamine, ketoprofen, cilazaprol, propranolol, sufentanil, metaproterenol, pentoxapylline, captopril, loxapine, cyproheptidine, carvediol, trihexylphenadine, alprostadil, melatonin, testosterone propionate, valproic acid, acebutolol, terbutaline, diazepam, topiramate, pentobarbital, alfentanil HCl, papaverine, nicergoline, fluconazole, zafirlukast, testosterone acetate, droperidol, atenolol, metoclopramide, enalapril, albuterol, ketotifen, isoproterenol, amidarone HCl, zileuton, midazolam, oxycodone, cilostazol, propofol, nabilone, gabapentin, famotidine, lorezepam, naltrexone, acetaminophen, sumatriptan, bitolterol, nifedipine, phenobarbital, phentolamine, 13-cis retinoic acid, droprenilamine HCl, amlodipine, caffeine, zopiclone, tramadol HCl, pirbuterol, naloxone, meperidine HCl, trimethobenzamide, nalmefene, scopolamine, sildenafil, carbamazepine, procaterol HCl, methysergide, glutathione, olanzapine, zolpidem, levorphanol, buspirone and mixtures thereof.

145. (Cancelled)

146. (Currently Amended) The method of claim ~~445~~ 10 wherein the compound to be delivered to the patient is vaporized over a period of time is no greater than about 2 seconds.

147. (Currently Amended) The method of claim 146 wherein the period of time is between ~~about~~ 1 millisecond ~~to~~ and 2 seconds.

148 - 153. (Cancelled)

154. (Currently Amended) The method of claim 10 further comprising depositing ~~wherein~~ a thin film comprising the compound is ~~deposited~~ onto a substrate ~~prior to step (a)~~.

155. (Cancelled)

156. (Withdrawn) The method of claim 10 wherein the compound is heated by moving the substrate through an alternating magnetic field to inductively heat the substrate.

157. (Withdrawn) The method of claim 156 wherein said substrate is a metallic foil.

158. (Withdrawn) The method of claim 157 wherein said substrate is a stainless steel foil.

159. (Withdrawn) The method of claim 158 wherein said substrate has a low thermal conductivity value.

160. (Withdrawn) The method of claim 158 wherein said compound is deposited onto said stainless steel foil at a thickness of no greater than about 10 microns.

161. (Withdrawn) The method of claim 156 wherein the deposited compound has a surface area of 1 to 10 cm².

162. (Withdrawn) The method of claim 156 wherein said alternating magnetic field is at less than about 1MHz.

163. (Withdrawn) The method of claim 156 wherein the frequency of said alternating magnetic field is between about 100 and 300 kHz.

164. (Withdrawn) The method of claim 156 wherein a ferrite core is used to control the shape of said alternating magnetic field.

165. (Withdrawn) The method of claim 164 wherein said substrate has a plurality of sections that are heated sequentially.

166. (Withdrawn) The method of claim 165 wherein said ferrite core has a saturation value such that by changing the drive frequency and amplitude the resulting magnetic field

expands to sequentially heat said sections and to vaporize the respective portions of said compound.

167. (Withdrawn) The method of claim 166 wherein said ferrite core has a variable air gap so that the resulting magnetic field expands to sequentially heat said sections and to vaporize the respective portions of said compound by varying the shape of said air gap of said ferrite core.

168. (Withdrawn) The method of claim 167 wherein the ferrite core is a toroid shape with a slit cut through it.

169. (Currently Amended) The method of claim 10 wherein ~~said physiologically active compound is deposited onto a thermally conductive substrate that is heated by transmitting~~ 140 further comprising establishing a thermal energy gradient from one location on the part of said substrate to other parts another location on the substrate.

170. (Currently Amended) The method of claim 10 wherein ~~said the~~ compound is contained in a heating-vaporization zone having a restricted cross-sectional area ~~such that the resulting vapor is rapidly mixed into said gas flowing through said zone.~~

171 - 173. (Cancelled)

174. (Withdrawn) The method of claim 10 wherein said compound is heated with photon energy.

175. (Currently Amended) The method of claim 10 wherein ~~said the~~ compound is heated ~~with resistive heaters~~ by electrical resistance.

176. (Withdrawn) The method of claim 10 wherein said compound is heated by inductive means.

177. (Currently Amended) The method of claim 40 ~~154~~ wherein ~~said compound is deposited on a~~ the substrate having comprises a plurality of sections that are heated sequentially.

178. (Withdrawn) The method of claim 177 wherein said sections are heated with photon energy.

179. (Currently Amended) The method of claim 177 wherein ~~said~~ the sections are heated ~~with resistive heaters~~ by electrical resistance.

180. (Withdrawn) The method of claim 177 wherein said sections are heated by inductive means.

181. (New) The method of claim 48 wherein the ratio of vapor to gas is controlled by regulating the flow of the gas.

182. (New) The method of claim 181 wherein the ratio of vapor to gas is additionally controlled by regulating the rate of vaporization.

183. (New) The method of claim 48 wherein the ratio of vapor to gas is controlled by regulating the rate of vaporization.

184. (New) The method of claim 48 further comprising depositing the compound onto a substrate.

185. (New) The method of claim 184 further comprising passing the gas across the surface of the compound.

186. (New) The method of claim 48 wherein the particle size is between about 1 to 3 microns.

187. (New) The method of claim 48 wherein the particle size is between about 10 to 100 nanometers.

188. (New) The method of claim 48 wherein the gas is air.

189. (New) The method of claim 48 wherein the compound is selected from the group consisting of cannabinoid extracts from cannabis, THC, ketorolac, fentanyl, morphine, testosterone, ibuprofen, codeine, nicotine, Vitamin A, Vitamin E acetate, Vitamin E, nitroglycerin, pilocarpine, mescaline, testosterone enanthate, menthol, phencaramide, methsuximide, eptastigmine, promethazine, procaine, retinol, lidocaine, trimeprazine, isosorbide dinitrate, timolol, methypyrrol, etamiphyllin, propoxyphene, salmetrol, vitamin E succinate, methadone, oxprenolol, isoproterenol bitartrate, etaqualone, Vitamin D3, ethambutol, ritodrine, omoconazole, cocaine, lomustine, ketamine, ketoprofen, cilazaprol, propranolol, sufentanil, metaproterenol, pentoxapylline, captopril, loxapine, cyproheptidine, carvediol, trihexylphenadine, alprostadil, melatonin, testosterone propionate, valproic acid, acebutolol, terbutaline, diazepam, topiramate, pentobarbital, alfentanil HCl, papaverine, nicergoline, fluconazole, zafirlukast, testosterone acetate, droperidol, atenolol, metoclopramide, enalapril, albuterol, ketotifen, isoproterenol, amidarone HCl, zileuton, midazolam, oxycodone, cilostazol, propofol, nabilone, gabapentin, famotidine, lorezepam, naltrexone, acetaminophen, sumatriptan, bitolterol, nifedipine, phenobarbital, phentolamine, 13-cis retinoic acid, droprenilamine HCl, amlodipine, caffeine, zopiclone, tramadol HCl, pirbuterol, naloxone, meperidine HCl, trimethobenzamide, nalmefene, scopolamine, sildenafil, carbamazepine, procaterol HCl, methysergide, glutathione, olanzapine, zolpidem, levorphanol, buspirone and mixtures thereof.

190. (New) The method of claim 48 wherein the compound to be delivered to the patient is vaporized over a period of time no greater than about 2 seconds.

191. (New) The method of claim 190 wherein the period of time is between 1 millisecond and 2 seconds.

192. (New) The method of claim 48 further comprising depositing a thin film comprising the compound onto a substrate.

193. (New) The method of claim 184 further comprising establishing a thermal energy gradient from one location on the substrate to another location on the substrate.

194. (New) The method of claim 48 wherein the compound is contained in a heating-vaporization zone having a restricted cross-sectional area.

195. (New) The method of claim 48 wherein the compound is heated by electrical resistance.

196. (New) The method of claim 184 wherein the substrate comprises a plurality of sections that are heated sequentially.

197. (New) The method of claim 177 wherein the sections are heated by electrical resistance.